

B1000ERW Series

Low Cost 1 x 2 Inch 10W Wide Input Range DC/DC Converters



Key Features:

- 10W Output Power
- 2:1 Input Voltage Range
- 1,500 VDC Isolation
- Efficiency to 86%
- Compact 1 x 2 Inch Case
- Single & Dual Outputs
- Industry Standard Pin-Out
- **Low, Low Cost!!**



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Electrical Specifications

Specifications typical @ +25°C, nominal input voltage & rated output current, unless otherwise noted. Specifications subject to change without notice.

Input						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Input Voltage Range	12 VDC Input	9.0	12.0	18.0	VDC	
	24 VDC Input	18.0	24.0	36.0		
	48 VDC Input	36.0	48.0	75.0		
Input Filter	LC Filter					
Short Circuit Input Power			1,500		mW	
Output						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Output Voltage Accuracy				±3.0	%	
Output Voltage Balance	Dual Output , Balanced Loads			±5.0	%	
Line Regulation	Vin = Min to Max		±0.1	±0.2	%	
Positive Load Regulation, See Note 1	Iout = 10% to 100%		0.2	0.5	%	
Ripple	See Note 2		30	50	mV P - P	
Noise			100	300	mV P - P	
Transient Recovery Time, See Note 3	25% Load Step Change		200		μSec	
Transient Response Deviation			±2.0		%	
Temperature Coefficient			±0.02		%/°C	
Output Short Circuit	Continuous (Autorecovery)					
General						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Isolation Voltage	60 Seconds	1,500			VDC	
Isolation Resistance	500 VDC	1,000			MΩ	
Isolation Capacitance	100 kHz, 1V		130		pF	
Switching Frequency			300		kHz	
Environmental						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Operating Temperature Range	Ambient	-40	+25	+85	°C	
Storage Temperature Range		-55		+125	°C	
Cooling	Free Air Convection					
Humidity	RH, Non-condensing			95	%	
Physical						
Case Size	2.0 x 1.0 x 0.44 Inches (50.8 x 25.4 x 11.2 mm)					
Case Material	Aluminum Alloy with Non-Conductive Base (UL94-V0) (UL94-V0)					
Weight	0.828 Oz (23.5g)					
Reliability Specifications						
Parameter	Conditions	Min.	Typ.	Max.	Units	
MTBF	MIL HDBK 217F, 25°C, Gnd Benign	1.0			MHours	
Absolute Maximum Ratings						
Parameter	Conditions	Min.	Typ.	Max.	Units	
Input Voltage Surge (1 Sec)	12 VDC Input	-0.7		20.0	VDC	
	24 VDC Input	-0.7		40.0		
	48 VDC Input	-0.7		80.0		
Lead Temperature	1.5 mm From Case for 10 Sec			300	°C	
Internal Power Dissipation	All Models			5,000	mW	

Caution: Exceeding Absolute Maximum Ratings may damage the module. These are not continuous operating ratings.

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